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EXAMINER

WOODS, ERIC V

ART UNIT

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/764,961	<b>Applicant(s)</b> STAMM ET AL.	
	<b>Examiner</b> Eric V. Woods	<b>Art Unit</b> 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-13 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Applicant is reminded of the duty to disclose under 37 CFR 1.56, and as part of that, MPEP 2001.06(b), third paragraph, clearly requires applicant to disclose all relevant and/or timely filed copending applications. Such applications must be noted in the specification, and applicant must amend the specification to include such applications that examiner has found, with specific ones set forth below. Specifically, applicant filed 10/764787, 10/764745, and 10/764622, which all appear to relevant subject matter, on the same day as the instant application.

Further, applicant is required to examine all co-pending applications filed by the present inventive entities, and determine which ones are relevant and disclose similar subject matter. Examiner **must** know these applications in order to make double patenting determinations, and applicant is expected to disclose such (see MPEP 2004).

Examiner objects to the specification because in paragraph [0022] at the beginning of the "Detailed Description" section of the specification, the last sentence refers to a "circularly dependent constraint," and then states that such a constraint would keep the edges of a diagonal stroke parallel. Examiner fails to understand, and one of ordinary skill in the art would also fail to understand, how such a constraint – e.g.

that two lines be kept parallel – would be circularly dependent. Indeed, parallel lines have nothing to do with a circle from a geometric point of view, except insofar as a circle could perhaps be used as a separator. Applicant is required to clarify this point, and examiner recommends bringing the definition in [0041] or [0042] of the specification into the Summary so that it is not confusing.

The specification is objected to because in paragraph [0033], it is not made clear that the computing system 118 generates control points 132 that contain the modified rules referred to therein (e.g. the instructions to design control points 122 and the like).

### ***Drawings***

The drawings are objected to because Figure 1 does not show that computing system 118 outputs control points 132. There should be an arrow there, as there clearly is indicated that design control points 122 are put into computing system 118, and where there is an arrow indicating that control points 132 are put into computing system 123. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claims 1 and 20 are objected to because of the following informalities: they use the words 'can not' as two separate words, not the word 'cannot' which is standard American English. Appropriate correction is required; this objection will not be held in abeyance.

The numbering of claims is not in accordance with 37 CFR 1.126, where there is no claim 5. Applicant is required to correct the numbering of the claims. There is a claim 4 and there exists a claim 6, so applicant is required to either add a claim 5 or renumber the existing claims.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 20 use the language "can be" in the last clause of the claim, and thusly renders the claim indefinite because it is unknown to what extent iterative

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processing is required or not, and further the nature of such processing, and how it is determined whether or not it is necessary.

All claims dependent upon 1 are rejected as not correcting the deficiencies of their parent claim(s).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 20 is a computer program product implementing the method of claim 1.

Clearly, software implementing a method that clearly is intended to be computer-implemented is subject to the same rejection without further comment. Therefore, since the references applied teach a computer-implemented method that would be inherently taught by those references. Finally, it would be obvious that a software program for making a computer execute a set of instructions is very clearly running on such a digital computer.

In response to applicant's arguments, the recitations in the preamble of claim 20 that are different from that of claim 1 has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

The CAFC recently issued a decision in *Phillips v. AWH Corp.*, No. 03-1269, slip op. (Fed. Cir. 2005)(2005 U.S. App LEXIS 13954). This decision stated *inter alia* that dictionaries and external evidence in a case do **not** dominate or control (see for example page 19, "We have viewed extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to read claim terms, for several reasons." See Section C, page 23, first paragraph, "... However, while extrinsic evidence 'can shed useful light on the relevant art,' we have explained that it is 'less significant than the intrinsic record in determining the legally operative meaning of claim language'..." Therefore, in light of *Phillips*, the definition in applicant's specification will be treated as controlling – in this case complex is defined as including complex mathematical functions; such as square root, power, exponent, and the like, as well as graphical shapes and distances that are not easily represented by for example quadratic Bezier curves (that the TrueType language utilizes).

Claims 1-2, 7, 9-11, 13, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stamm (US 6,249,908 B1) in view of Collins et al (US 5,817,714 A)('Collins') and DeRose et al (US PGPub 2001/0002131 A1)('DeRose').

As to claims 1 and 20,

In a computing system that has access to a set of control points, the set of control points for generating an outline of a graphical object, the outline being utilized to determine how the graphical object is rendered, the position of some portions of the outline potentially being constrained to pre-determined locations, a method for using a font-hinting language to represent an iterative solution to a constraint, the method comprising: (Stamm teaches that a font hinting language inherently provides the preamble – TrueType and higher level abstractions are taught in 1:37-54. Secondly, the above cited paragraph recites the use of control points, and of holding points at certain values and with certain relationships, and clearly it is specified the typographer sets forth the outline of the font.)(Collins also uses TrueType – 2:50-65, and in Collins the approximations of the outline are constrained by the existing font being converted from – e.g. 15:60-16:15, where the new, low level constraints are bounded by the location of the device-independent points)

-Accessing a more complex constraint that cannot be natively expressed based on the vocabulary of the font-hinting language, the more complex constraint constraining at least a portion of the outline; (Stamm teaches that the Type Man Talk high-level abstraction of the TrueType language is cited in the above paragraph. Further, in 3:11-35 it is stated the Stamm invention generates high-level hinting information for a font,



where such information is translated or interpreted to and from graphical format so that the user can see such information. Clearly, it is intended that the user generate complex programs (e.g. features not natively supported at a low-level of TrueType or similar program languages)(see the Abstract and 18:45-65. In that passage (18:45-65), it is stated that experienced font programmers can alter the font using a high-level programming language but still see the graphical representations of their work. Further, the “high-level” language mentioned clearly constitutes a high-level abstraction of the low level TrueType instructions or similar as cited above.)(Collins teaches accessing a predefined font description, which uses a plurality of outline characters to define segments of the shape of a character in a font description language – see 47:35-39. Collins then teaches that a new font description of outline segments is generated from the predefined one in a new font description language. In 2:50-65, the use of multiple languages such as Adobe Postscript (Type 1) and Intellifont description languages are taught. Further, it is known that in PostScript page description language that it is a high-level language that describes page layout, fonts, and non-character shapes – 23:40-50. Clearly, constraints in such a language are more advanced – e.g. are “complex” as defined by the applicant, and a cubic Bezier curve (such as that used in Postscript Type 1 fonts) is more complex than the quadratic Bezier curve allowed in the TrueType language.)

-Decomposing the more complex constraint into a plurality of simpler constraints that can be natively expressed based on the vocabulary of the font-hinting language; and (In Stamm, clearly, the high-level instructions or complex constraints are translated into

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low-level instructions (e.g. native TrueType commands). See 7:55-8:4, where it is expressly taught that within Figure 2, the graphical representation 200 is translated or converted by process 215 into high-level language hinting instructions 225 which are then compiled to low-level TrueType instructions (unlabeled step in Figure 2, but the box labeled 'TrueType Instructions' is present). The compilation process from high-level language into low-level (or native) commands or constraints clearly constitutes the recited decomposition, and it is well established in the art that TrueType is a font-hinting language. As stated in the opening portion of the specification, e.g. 1:37-54, the hints can be specified in either the low level language or the higher level abstraction, so clearly the simpler constraints would be those of the commands in the low level language as recited in the clause above.)(Collins clearly teaches translating one font language to another, and when the first font language is Adobe Postscript Type 1 or 3 with cubic Bezier splines and the target language is TrueType, which only supports quadratic Bezier curves, it would be obvious that a more complex function would be translated to two less complex ones, e.g. it is well known in the art that in order to replicate an 'S' character, one cubic Bezier curve would be sufficient, since it has two inflection points to change direction, whereas implementing it with quadratic Bezier curves would require two curves to generate the same result. Clearly, transferring between one and other would clearly involve decomposing higher level instructions into lower-level ones in this particular case)

-Representing each of the simpler constraints in corresponding font-hinting language instructions that can be iteratively processed to at least approximate a solution to the

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more complex constraint. (Stamm clearly teaches that the more complex language is decomposed to more simple instructions.)(Collins clearly teaches that the translated instructions are approximate – see 47:57-64, where the shape of the outline is approximated between device-independent points with new segments bounded by such points. Such approximations are part of modeling a new font to mimic the translated one (47:48-58). In 3:45-55, the idea of stretching an existing font to approximate another one is mentioned but disparaged. The solution present by Collins involves (15:60-16:14) choosing tangent points that are not labeled as a corner and are between a curve and a line segment, where the circumstances are such that it is unlikely that a single cubic Bezier curve could approximate the shape of both. New segments are formed based on various techniques taught therein.)(DeRose clearly teaches in the abstract that the system is directed to more efficiently modeling objects in computer graphics. In [0026] it is stated that the system first produces a two-dimensional mesh. Note that it is irrelevant that this two-dimensional mesh is applied to a three-dimensional object insofar as the positions of the control points on the mesh are concerned (see [0027-0028]). Now, there are equations that describe the positions of the control points on the mesh, as established in [0031-0033]. Regardless of the three-dimensional import of those equations, the fact remains that they are applied to a **two-dimensional** mesh. This mesh has a two-dimensional texture applied to it [0038]. Now, in [0044-0045], it is taught that the energy function is **restricted to two dimensions** [0045], where it can be implemented on surface defined by NURBS (non-uniform rational B-splines, which can include Bezier patches). The point of this exercise is that in [0046-

0047] it is clear that the minimization of the energy function is done in **two dimensions**. This minimization is done using Newton's method or other standard numerical technique for minimization (see [0047]), where in [0051-0052] it is taught that as is well known in the art, Newton's method is iterative and is used to converge the equations to a more refined approximation, where in [0051] "a few iterations generally suffice." Clearly, this method is used **approximate** a best fit ([0028-0029, 0039-0040, 0045-47, and 0051] to the energy function, which very clearly meets the standards of the claim. Clearly, the method works to **position the control points on the mesh in such a way as to minimize the energy function** (see [0051]).)

Clearly, the equations referred to in DeRose [0051] that are used to define the energy function could just as easily be used to approximate a best fit to the original font and could be used to position the control points cited in Collins above to minimize the fit between the segments and points of the outline character in the original font description or hinting language in Collins and the translated version in the second font or character description language. Collins states that the method also applies to cases where high-level languages contain items other than fonts (23:40-50), as in page description languages, and in Stamm et al, a paper is listed in the "Other Publications" sections called "Glyphs: flyweight objects for user interfaces", where that only serves to emphasize the point that glyphs are graphical objects. Collins teaches the key linkage, where the approximated segments are created (15:60-16:14) in a manner that is designed to approximate the curves and features of the font that they came from. The equations described therein could constitute the energy functions of DeRose that would

clearly then be minimized using a standard numerical technique, such as Newton's method. DeRose is merely used as an example of a well-known technique in the art, that approximate solutions can be greatly improved by iterating through equation systems defining the approximations until they converge to a satisfactory degree, and examiner asserts that using iterative techniques are well known in the art, and further takes Official Notice to that effect, since it is well known that the advantage of the numerical methods like Newton is that (as stated in DeRose), they generally only require a few iterations and produce satisfactory results. Further, DeRose clearly teaches in 18:10-17 that lines or Bezier curves are used to perform the approximation under certain circumstances, and that line or curve fitting techniques are used to find the approximation. It is well known in the art that Newton's method can be used to perform curve and line fitting to get a good approximation.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the systems of Stamm and Collins, as Collins clearly allows a system to create a version of a font that is similar to one that is desired to be displayed, but that the target system does not possess (as in on the Internet – see Collins Abstract) and the portable format will allow the target system to merely download sets of shapes and create the new font at the operating system level (4:47-5:30), where the motivation is to allow new text formats that are more interesting to the user. The system of Stamm, while allowing a font designer to create new fonts, does not expressly allow the creation of new fonts based on portable or cross-platform formats, and does not explicitly discuss translating between font hinting languages. The

system of Collins allows for the translation of fonts generated in one font language (e.g. Postscript) into another (e.g. TrueType), which would be another advantage that Stamm would gain by the incorporation of Collins.

Motivation for combination of Stamm and Collins with DeRose is provided above, with the combination of DeRose serving to speed up the approximations used by Collins to generate new font elements and the like.

Further, Stamm and Collins are clearly analogous art with the instant application, and Collins and DeRose are also directed to the same problem-solving area.

As to claim 2, the energy functions of DeRose as cited in claim 1 can be exponential and power functions as stated n for example [0045-0047] and the like. Furthermore, the curve and line fitting methods of Collins clearly apply, where it is well known that a curve fitting function is nonlinear, and nonlinear functions clearly involve power or exponentials in some way. Finally, a cubic Bezier curve in Postscript being transformed to a quadratic Bezier curve in TrueType clearly involves some kind exponential and/or power function mapping. Motivation for combination is taken from the rejection to claim 1 as above.

As to claim 7, the system of Stamm clearly teaches in 9:59-6:18 that each control point (in the data structure) has a freedom direction data field to indicate the direction that the point can be moved, and further has both move and delta exception fields, which allow the control point to be moved a certain distance regardless of ppm variations or vice versa. This clearly teaches that control points can be moved. Further, Stamm sets forth a graphical environment where the user can manipulate the

characteristics of a font, which will then be translated into high-level language commands. Basically, since the combination of Stamm and Collins was explained in the rejection to claim 1, the decomposition of high-level functional language into TrueType low-level assembly commands would necessarily result in the decomposition of complex operations into low-level constraints that only can involve moving one point (e.g. imposing a simple fixed or relative distance constraint). Those are the only kind that the low-level TrueType format allows, and as set forth above, the system of Stamm clearly has provisions for moving control points one at a time. As such, the rejection to claim 1 is incorporated by reference.

As to claim 9, the system of Stamm clearly utilizes low level TrueType instructions as set forth in the rejection to claim 1, which is incorporated by reference.

As to claim 10, Collins clearly teaches in 18:10-27 that the system calculates the number of times a curve has to be subdivided into two before the worst error is less than one half ORU. As stated above in the rejection to claim 1, which is incorporated by reference, it would be obvious to use an iterative method, since that method is always bounded by a finite constraint and would be an improvement over the recursive methods of Collins that could lead an infinite loop and high memory consumption. Both techniques are well known in the computer science art (iteration and recursion) and can be used interchangeably. In any case, Newton's method (as cited in DeRose) is iterative and is incorporated by reference. The concept of having a loop iterate a number of times until it reaches a certain specified tolerance is comparable to the concept of having a function recurse until it converges to a certain tolerance band

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around a solution (and DeRose teaches that usually a few iterations of Newton's method is sufficient in any case, where 'sufficient' clearly entails the idea of a tolerance band.

As stated in the rejection to claim 1, Collins approximates a solution using curve- or line-fitting techniques (18:10-27), where iterating instead of recursing has already been covered, and the system of Stamm converts high level instructions to low level ones, and clearly Collins teaches in the claims (the 47:x – y reference locations in the rejection to claim 1) that such translations from one language to another end up altering the outline in one way or another, and in the figures that seems to be reflected.

Obviously, the final output object will have a tolerance within the band mentioned by DeRose or as set forth above by Collins. Clearly, the final result of the process would be a pixilated representation of the graphical object (e.g. a bitmap) as taught by Collins in 2:64-3:20 and 10:27-45, where bitmap representations are put into the portable font format, and it is known that the final output of the font to a screen or a printer will require it to be converted to a raster graphics (e.g. pixilated) representation. Motivation is incorporated from the rejection to claim 1. Also, such output fonts are output to monitor 47 of Stamm Figure 1, which inherently requires a pixilated representation.

Claim 11 is merely a broader version of claim 10, with some but not all of the limitations of independent claim 1. As such, the rejections to both are incorporated by reference, which teaches all the limitations of this particular claim.

Claim 13 is rejected since the control points in the data structure of Stamm clearly have delta and move exception fields which clearly indicate that high-level



instruction that only move individual control points exist, and clearly these would have to be decomposed to simpler, low level TrueType instructions for final processing.

Further, it would be obvious that single point operations could be utilized, and that when a more complex constraint is decomposed into simpler ones that single control point move instructions could / would be included among the list therein.

Claim 16 is rejected as per claim 10, where the concept of having a fixed number of iterations is mentioned – and the reason why is provided by DeRose, where the statement in [0051-0052] is that a few iterations of Newton's method is usually sufficient, thus meaning that having a fixed number of iterations would be obvious. That rejection is incorporated by reference.

Claim 17 is rejected as per claim 10, where the idea of iteratively processing until a tolerance is reached is discussed. That rejection is incorporated by reference.

Claim 18 is rejected as per claim 9 – Stamm clearly teaches the use of TrueType instructions, and Stamm further teaches using high-level representations of TrueType instructions that are abstractions, so in either case this limitation is met.

Claim 19 is rejected because it is merely a more explicit version of claim 10, where Collins also teaches generating an outline of a graphical object (character) that conforms with the more complex constraint to a certain desired tolerance and/or error threshold, and Stamm clearly teaches that such representations would be displayed on monitor 17 in Figure 1, which clearly requires a pixilated representation.

Claim 3 is rejected as unpatentable over Stamm in view of Collins and DeRose as applied to claim 1 above, and further in view of Rappoport et al (WO 98/36630)('Rappoport').

As to claim 3,

The method as recited in claim 1, wherein accessing a more complex constraint that cannot be natively expressed based on the vocabulary of the font-hinting language comprises accessing a constraint that requires a plurality of control points to be moved simultaneously.

First of all, the system of Stamm clearly teaches in 9:59-6:18 that each control point (in the data structure) has a freedom direction data field to indicate the direction that the point can be moved, and further has both move and delta exception fields, which allow the control point to be moved a certain distance regardless of ppem variations or vice versa. This clearly teaches that control points can be moved. Further, Stamm sets forth a graphical environment where the user can manipulate the characteristics of a font, which will then be translated into high-level language commands. The idea of being able to move multiple control points, while not being explicit, is strongly suggested. The other two references do not per se teach this limitation, although DeRose teaches moving control points on the mesh in response to minimization of the energy function, which would seem to comprise moving multiple control points simultaneously.

Rappoport clearly teaches how one external parameter (see abstract) can be linked to multiple constraints (see Figure 1, where the parameters 24 are linked to

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constraints 22, and Rappoport clearly teaches changing external font parameters in the Abstract and in the locations stated above. Further, in 15:1-10 and in other locations, a user interface to simultaneously adjust several external font parameters is taught, and these clearly effect how the font is rendered, for example, one is listed in Figs. 8A-8D, and for example the width of a stem is changed in Figs. 4A-4B, as noted in the first paragraph, and it moves the associated control points on the stem to the left and the right, which obviously involves moving multiple control points. Basically, examiner's position is that when changing any of the major dimensions of a font with global parameters, multiple control points must *prima facie* be moved simultaneously to effect the required scaling.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Rappoport with Stamm, Collins, and DeRose, for several reasons, one being that applicant supplied a relevant article by Rappoport concerning the same subject matter, which is an implicit admittance of relevancy; secondly, Rappoport allows the user to manipulate many constraints on a glyph or a font generally in a graphical manner (see 15:1-10) in a way that would give the hypothetical font designer or typographer utilizing the system of Stamm the ability to further manipulate all the glyphs in the advanced hinting system taught therein in a manner that would allow simultaneous control over several relevant parameters of the font, thusly shortening the design cycle (see for example 15:1-10 and other relevant locations).

As to claim 4,

The rejection to claim 3 is incorporated by reference. Further, the Stamm reference does inherently teach this limitation for the reason that it teaches the use of letters in a font that are Roman, e.g. the letter 'z' as given as an example in the instant application, which would obviously have circularly dependent constraints in the very nature of its configuration. Further, Rappoport also teaches in Figures 11-14 the use of the letter 'A' which has diagonal components that would clearly also have circular constraints as defined in the specification, where a circular constraint would merely consist of control points with a fixed distance between them, where each effected the other, which could very easily be the case, where in Rappoport Figure 14, multiple constraints involving distances in the letter 'A' are shown, where clearly some of those would be connected in such a way that circular dependencies would result. Clearly, since the existence of such dependencies has been proven, it would be obvious that when the font is accessed, circularly dependent constraints are prima facie accessed.

Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as unpatentable over Stamm in view of Collins and DeRose as applied to claim 1 above, and further in view of Weisstein (Weisstein, Eric W. "Taylor Series". From *MathWorld*—A Wolfram Web Resource, 1999).

Claim 6 is similar to claim 1 except that the decomposition of a power series into discrete elements is recited. It is well known in the art that a Taylor series can be used to approximate a function. The first page of the Weisstein reference provides a Taylor series approximation of an exponential function by providing the expansion for it, where the expansion is most assuredly a plurality of terms of a power series. It would have

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been obvious to use a Taylor series to do so because it allows a quick approximation with low error for a power series.

Claim 12 is similar to claim 6 (different limitations in the parent claim, but same combination of references used against it) but the rejection is incorporated by reference herein.

### ***Allowable Subject Matter***

Claims 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The following prior art is made of record: see 892 for references that are made of record but are not used to reject applicant's claims.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric V. Woods whose telephone number is 571-272-7775. The examiner can normally be reached on M-F 7:30-4:30 alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Eric Woods  
July 14, 2005

  
JEFFREY A. BRIES  
PRIMARY EXAMINER